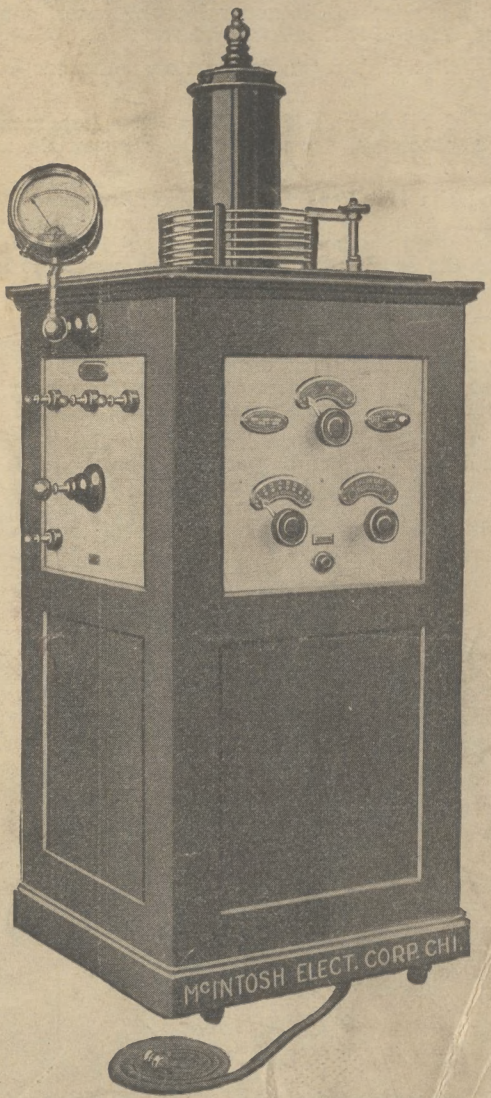
Efficiency Supreme

In Medical and Surgical Diathermy, Auto-Condensation
Electro-Coagulation, Fulguration, Desiccation, Etc., Combining

Great Power, Exquisite Refinement and Extreme Delicacy of Control



No. 8420, HOGAN SUPER-POWER HIGH FREQUENCY APPARATUS
Embodying Three Distinct and Separate High Frequency Currents
Insuring Correct and Precise Therapeutic Effects.

MANUFACTURED BY

McIntosh Electrical Corporation

Successors to McIntosh Battery & Optical Co., Est. 1879

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PREFACE

THERAPEUTICS with the aid of the high frequency currents are conceded as practically an absolute necessary adjuvant to successful medical and surgical practice.

Such, not only applies to the general practitioner, surgeon, or specialist, but to all hospital and institutional laboratories.

The result is, that higher standardization and more exacting technique has developed.

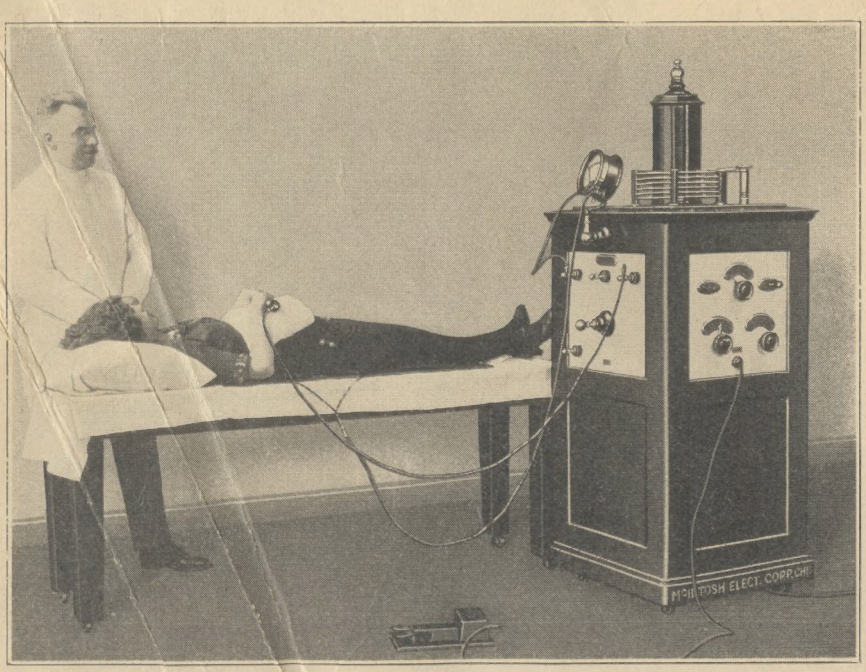
To meet this development, High Frequency Apparatus possessing the features of exact precision, accurate control essentials and stability, are necessary.

In presenting the No. 8420 Hogan High Frequency Apparatus to the medical profession, every facility in the McIntosh medical research laboratory and engineering department has been put forth to evolve an apparatus to excell even the super qualities that were contained in the former No. 8400 model.

In the design and construction of the No. 8420, advanced electrical and mechanical principles have been incorporated in the development of increased capacity both of the transformer and condenser. Also, a spark gap of still greater stability and refinement, and yet retaining its simplicity of construction. Perfect resonance, therefore, being assured at all voltages.

Delicacy of control is also an important and inherent quality of the No. 8420, so that desiccation can be performed on the most sensitive mucous membrane, heavy applications of Diathermy, as in chest or abdominal conditions, or large dosages in Electro-coagulation for destruction of the densest malignant tissues, can be carried out with ease and precision.

The result is, that this High Frequency Apparatus maintains a place far in advance of any apparatus yet offered to the profession.



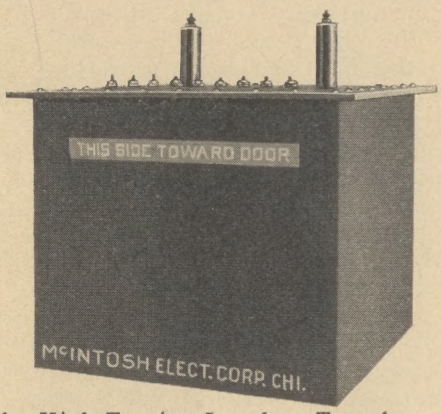
Illustrating method of administering Auto-Condensation treatment using the d'Arsonval Current.

DESCRIPTION

TRANSFORMER

Exclusive McIntosh features are embodied in the construction of the high tension step up transformer.

The closed core type has been adhered to, but is now immersed in a semi fluid compound, possessing the most effective insulating properties known to electrical science. Loss by evaporation is also prevented.



The High Tension Low-loss Transformer.

A new principle in transformer construction has been incorporated, eliminating magnetic and hysteresis loss. The result being an increased capacity of 50% over the ordinary type of transformer.

These features absolutely insure the apparatus to run in continuous daily service, at all times maintaining the highest efficiency.

THE CONDENSER

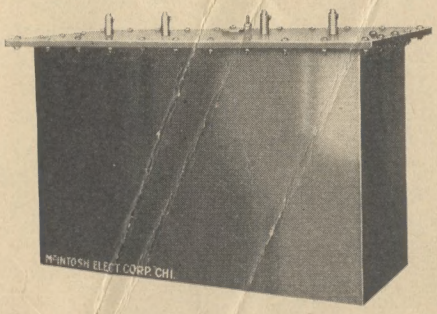
is of the Franklin plate type and immersed in oil to prevent spraying between the plates, also insuring a much greater dielectric strength than the wax filled, or open Franklin plate types.

The plates of the condenser have been specially designed and arranged, so that more than an adequate capacity is available, providing a perfect resonant circuit, delivering a non-faradic and extremely smooth, high oscillating current.

With this type of condenser there are no parts to corrode and no chemicals used, with a consequent passing off of gases with their corrosive and oxidizing effect upon connections and other metal working parts within the cabinet.

THE SPARK GAP

Electrical engineers are agreed that the most important unit of a High Frequency Apparatus is the spark gap. Upon it depends the smoothness and adequate delivery of the high frequency current. Oxidization and heating of the metal parts must of necessity be at an absolute minimum, combined with accessibility, simplicity of construction and facility of control.

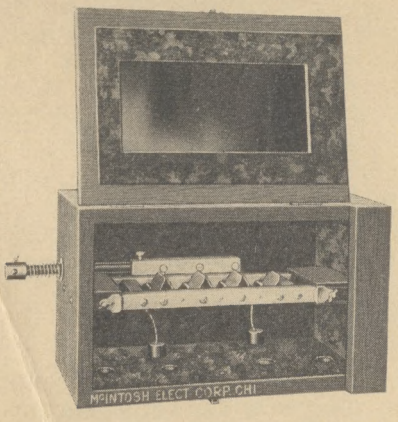


Franklin Glass Plate Condenser.

It is a noteworthy fact, that for the past five years, the McIntosh Electrical Corporation have not changed

the construction principles of the spark gap in their High Frequency Apparatii.

Further laboratory researches and exhaustive electrical engineering tests have proven that these principles should still be adhered to, and that the spark gap as embodied in the No. 8420, gives the highest efficiency under the most rigid requirements.



Showing Spark Gap within Air Chamber.

Its construction is of non-oxidizable, highly refractory metal plates, mounted on a solid lava base. The plates are so arranged that ample sparking surface is provided; pitting of the metal, interference of a smooth running current and necessity of frequent adjustments, is thus prevented.

The gap itself is mounted in a large air chamber, mica lined, and provided with ample ventilation so that no gases are created or accumulated.

The control handle is "directly connected" and adjusted in such a manner that on the slightest turn, the sparking spaces are opened in an exceptionally gradual manner.

The construction of the spark gap on the whole is simplicity itself, yet embodying sturdiness and stability not found in other makes. A minute adjustment is thus made possible from an extremely delicate discharge, to one as heavy as required.

THE AIR CHAMBER

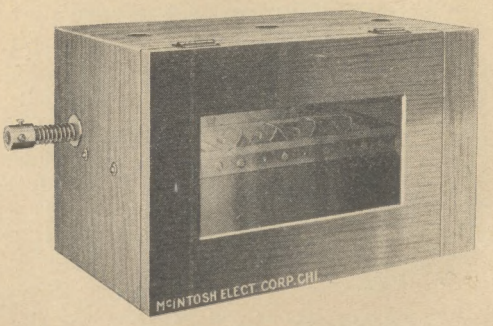
in which the spark gap is mounted, is enclosed within the cabinet, effectively muffling the sound during operation, adding greatly to the efficiency and refinement of the apparatus.

In addition, the construction of the cabinet provides a natural draft, giving great assistance to the ventilation qualities of the chamber itself. At the back of the airchamber, is fitted a hinged door, in which is mounted a ruby glass, thus permitting a full view of the spark gap and yet protecting the eyes from the ultra violet rays generated.

The "air cooling" of the spark gap within the chamber, enables it to be operated over long periods of time, with practically no attention. This element of high efficiency and durability, will convince the doctor of the desirability of the No. 8420 Hogan High Frequency apparatus as an integral part of his electro-therapeutic equipment.

THE MILLIAMETER

is of the double reading type and is standard equipment with this apparatus. A double reading meter,

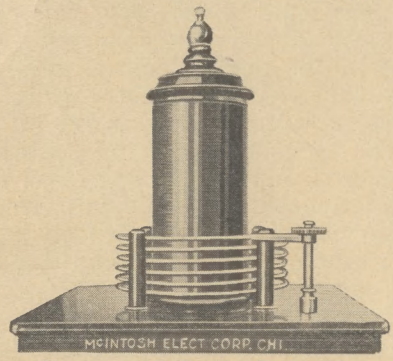


Showing Air Chamber closed. Note ventilation facilities.

without doubt, offers the means of obtaining a very close and accurate reading of lower current values below 1000 milliamperes, in addition to the same manner of reading on higher values.

There are no cords to pull or hold when reading of the lower scale is required. All that is necessary, being a change of connections on the meter terminals. Owing to the fact that all modalities are permanently in the circuit, no surge arresters are used.

The meter is mounted on a swivel arm fitted in a convenient position on the cabinet. The operator is thus enabled to read his dosages at any angle or position.



Close-up of Oudin Resonator.

d'ARSONVAL CURRENT

This is obtained from an electrically and mechanically correct source. That is, from a specially constructed d'Arsonval Solenoid connected across the condensers. It is only by such means that the desired medium voltage and high amperage d'Arsonval current—possessing the greatest heating properties with an entire absence of faradic effect—can be obtained to assure correct therapeutic thermal reactions either in auto-condensation to saturation point, or adequate heating effects in medical or surgical Diathermy treatments.

TESLA CURRENT

The Tesla current is developed from a Tesla coil, composed of two concentric windings within a high grade, heat resisting, insulating medium. These windings are tapped at a point to produce a perfectly resonant high voltage and medium amperage Tesla current.

When sedative thermal effects are indicated, auto-condensation treatments can be administered, or local heating effects by the "indirect" method. An adequate powerful hot spark is also available to carry out desiccation or fulguration.

THE OUDIN RESONATOR

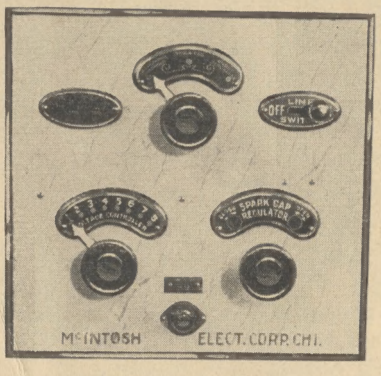
The Oudin Resonator is another very necessary unit and which is furnished as standard equipment on McIntosh High Frequency Apparatii.

It is only by means of an Oudin Resonator that the desired extremely high voltage with practically no amperage high frequency current can be obtained. Hence it is particularly adapted for light desiccation treatments on delicate mucous [illegible]ne, painless removal of [illegible] and moles, also treating many functional conditions and various neuroses.

Close-up of patient's terminal panel.

CAPACITY

It has always been the McIntosh policy to make conservative rather than extravagant statements. We firmly believe that the doctor should be given facts and facts only.



Showing detail of Operating Panel.

Repeated and rigid laboratory tests, carried out under exactly the same conditions as exist in the doctors' office, gave the following results: In Diathermy, using the d'Arsonval current and placing 8x8 in. block tin electrodes, abdomen and back, 4800 M.A. was obtained without any faradism being experienced. Again, with the d'Arsonval current in auto-condensation and patient lying on the auto-condensation pad, 2000 M.A. was obtained.

With the Tesla current, in auto-condensation and under the same conditions, 1000 M.A. was developed.

Inasmuch as correct technic does not indicate more than a maximum dose of 900 M.A. in auto-condensation, the above tests clearly demonstrate the tremendous Reserve Capacity of the 8420 Hogan High Frequency Apparatus.

OPERATING PANELS

All control switches, such as the Voltage Control, Line Switch, Spark Gap Regulator and Modality Selector are conveniently arranged on one panel.

Each operating handle is plainly designated by a suitable name plate, thus obviating any confusion or lost motion and greatly assisting in the ease and simplicity of operation.

All switches and controls are of the concealed type, only the control handles appearing on the outside.

Connection terminals for the d'Arsonval and Tesla currents are suitably arranged and mounted on a separate panel.

These terminals are of the screw-locking type, thus preventing loose connections or cord tips being inadvertently pulled out.

Each terminal is numbered. A designation plate being placed in a prominent position so that rapidity and ease of connecting patient in circuit, is absolutely assured.

All metal parts are highly finished in nickel plate and in conjunction with the polished hard rubber control handles and fittings, making a beautiful contrast with the white marble panels upon which they are mounted.

THE MODALITY SELECTOR

is another special feature of McIntosh High Frequency Apparatus. By simply turning the control handle to position designated on name plate, any one of the three High Frequency currents is immediately and independently placed in circuit.

THE VOLTAGE CONTROLLER

regulates the voltage of all modalities. It has been particularly designated and constructed to function with absolute positive contact at each change of position.

The contacts are of the wiping type and so adjusted that a sensitory indication is given as each change of contact is made.

THE CABINET

is of genuine mahogany, carefully selected, and is finished in an exclusive brown tone, constituting an artistic working unit to the best appointed office.

A hinged door is fitted at the back of the cabinet, thus facilitating inspection of the interior, etc. A circular glass pane is mounted in the door of the cabinet, permitting the operator to view the spark gap without the necessity of opening the door.

PREDOMINATING AND SPECIAL FACTORS

Low energy loss transformer.
High capacity oil immersed condenser.
Accurate control essentials.
Delicacy and precision of control.
Accessibility of component parts.
Perfect resonance.
Three distinct high frequency currents.
Correct Therapeutic effects.
Non-oxidizable air cooled spark gap (within cabinet).
Durability and stability.

DIMENSIONS

Depth, 25½ inches Width, 25½ inches Height (over all), 68 inches

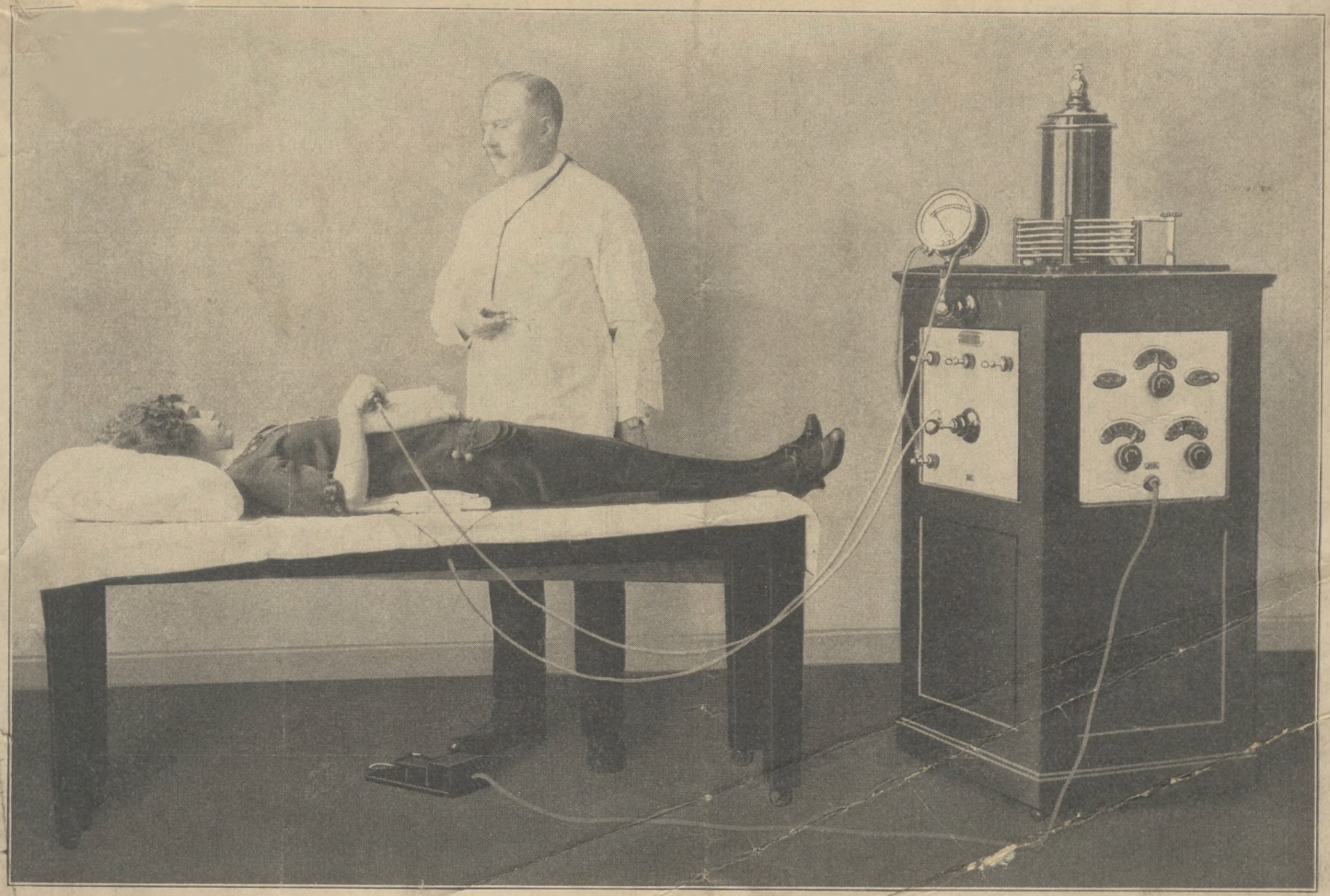
DOMESTIC PACKING

Packed in	Contents	Weight in Lbs.
Crate	Cabinet	305
Case	Transformer	130
Case	Accessories	90

QUOTATIONS

Fig.			Code
8420	Hogan Super-Power High Frequency Apparatus, for 110 Volt, 60 Cycle, A.C. including connecting Cable and the following equipment:		
	Fig. 8206 Double Scale High Frequency Milliameter—0-1,000—0-5,000.		
	Fig. 8103 One Pair Heavy Insulated High Frequency Cords.		
	Fig. 8100 MacLagan Universal Vacuum Electrode Handle.		
	Fig. 9150 Cord Reel.		
	Fig. 8300 Non-Vacuum Body Surface Electrode.		
	Fig. 8214 Folding Auto-Condensation Pad.		
	Fig. 8205 Auto-Condensation Handle.		
	Fig. 8230 MacLagan Insulated Foot Switch, including 8 ft. Cable.		
	Fig. 8220 Diathermy Electrode Set, consisting of 5 lbs., 22 gauge, Block Tin Alloy, 12 inches wide, and 6 Morse Spring Clip Connectors.		
	Fig. 8116 T. Howard Plank's Electro-Coagulation Set.		
	Fig. 8340 Waggoner's Double Ear Electrode.		
	Fig. 8250 Waggoner's Tonsil Electrode.	$800.00	Hercules
8421	Hogan Super-Power High Frequency Apparatus, for 220 Volt, 60 Cycle, A.C., complete with above Accessories	850.00	Heriot
8422	Hogan Super-Power High Frequency Apparatus, for 110 Volt, 25 Cycle, A.C., complete with above Accessories	850.00	Herod
8423	Hogan Super-Power High Frequency Apparatus, for 110 Volt, 50 Cycle, A.C., complete with above Accessories	850.00	Humid
9072	Rotary Converter, including Step-Up Transformer, to operate Fig. 8420, on 110 Volt, D.C.	250.00	Phyllis

Other special voltages and cycleges quoted upon request.



Showing method of giving Auto-Condensation treatment with the Tesla Current.